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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,690	11/05/2001	Chung-Fan Chiou	0158/0J975	9169
7590 05/21/2004				
DARBY & DARBY P.C. 805 Third Avenue New York, NY 10022		EXAMINER NAGPAUL, JYOTI		
		ART UNIT 1743		
		PAPER NUMBER		

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/021,690

Applicant(s)

CHIOU ET AL.

Examiner

Jyoti Nagpaul

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,8-12,15 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 3,4,6,7,13,14,16 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

2. Claims 1 and 11 are rejected under 35 U.S.C. 102 as being anticipated by Drago. Drago describes an ink jet drop-on-demand print head comprising of a plurality of tubular piezoelectric transducers (26), and a mounting member for holding transducers (24). The print head is under the control of a electrically controlled substrate (70) (See col. 5, lines 14-35, Refer to Figure 3). Thus, it reasonably appears that Drag describes or discloses every element of the claim and therefore anticipates the claims subject to this rejection.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drago in view of Matsson. Drago describes an ink jet drop-on-demand print head comprising of a plurality of tubular piezoelectric transducers (26), a mounting member for holding transducers (24), and is under the control of a electrically controlled substrate (70) (See col. 5, lines 14-35, Refer to Figure 3). Drago fails to

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describe the base comprising of at least one recess formed adjacent to each hole, and each of the tube assemblies is provided with at least one protrusion corresponding to the at least one recess for engaging with the base.

Matsson discloses one of the abutments of the first wall on the base is received in the recess on one side of the vial and the abutment desirably engages the angled bottom face of that recess (Refer to Figure 5).

It would have been obvious to one of the ordinary skill in this art at the time of invention by applicant to modify the system of Drago to include the features of Matsson such that the abutments of the first wall on the base is received in the recess on one side of the vial and the abutment desirably engages the angled bottom face of that recess because this will strongly hold the tube assemblies in the base and prevent any dislodgement of the tube when the tube is drawn.

5. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drago in view of Levy.

Drago describes an ink jet drop-on-demand print head comprising of a plurality of tubular piezoelectric transducers (26), a mounting member for holding transducers (24), and is under the control of a electrically controlled substrate (70) (See col. 5, lines 14-35, Refer to Figure 3). Drago fails to describe the tube assemblies are marked with a code indicating the type of fluid contained.

Levy teaches the labeling or coding of tubes assemblies to indicate the type of fluid contained (Refer to Figure 8).

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It would have been obvious to one of the ordinary skill in this art at the time of invention by applicant to modify the system of Drago to include the features of Levy such that the tube assemblies are marked with a code to determine the fluid contained because this provides identification of fluid in each of the tube assemblies.

6. Claims 8-10 and 18-20 are rejected under 35 U.S.C. 103(a) as being obvious over Drago.

Drago describes an ink jet drop-on-demand print head comprising of a plurality of tubular piezoelectric transducers (26), a mounting member for holding transducers (24), and is under the control of a electrically controlled substrate (70) (See col. 5, lines 14-35, Refer to Figure 3). Drago does not specifically teach any particular type of ink-jet printer.

It would have been obvious to one of the ordinary skill in this art at the time of invention by applicant to employ the system of Drago to operate the tube assemblies in any of pulse pressure ink-jet or bubble ink-jet or slit ink-jet because these different types of ink-jet are well known in the art. Drago teaches that the print head would be useful in any type of ink-jet print head.

***Allowable Subject Matter***

7. Claims 3,4,6,7,13,14,16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does not teach, or fairly suggest the base of the microdispenser is provided with at least one first pad disposed in each of the holes separately, and

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each of the tube assemblies is provided with at least one second pad corresponding to the at least one first pad, wherein the second pads abut the first pads when the tube assemblies are inserted into the holes of the base and the tube assemblies are comprised of a receptacle, provided with the protrusions formed thereon and the second pads disposed therein, having a passage; a capillary tube, for retaining the fluid, disposed in the receptacle at one end of the passage; and a print chip head, disposed in the receptacle at the other end of the passage, abutting the second pads and communicating with the capillary tube as shown in claims 3,4,13 and 14. The prior art does not teach, or fairly suggest the base is provided with a first detecting device for detecting the amount of the fluid and each of the tube assemblies is provided with a second detecting device for detecting the amount of fluid remaining therein as shown in claims 6,7,16 and 17.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Nagpaul whose telephone number is 571-272-1273. The examiner can normally be reached on 8:00-4:30 ( Mon-Fri).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN

  
Jill Warden  
Supervisory Patent Examiner  
Technology Center 1700